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Information Requirements

Event Summary

Version 1.1 - 24 October 2011

Final

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Document Information

Change history

Version	Date	Contributor	Comments
v0.1.1	2011-01-19	Rob Eastwood	Initial version
v0.1.2	2011-01-24	Rob Eastwood	Updated version following small group Clinical Leads workshop, 21 Jan 2011
v0.2.0	2011-01-31	Rob Eastwood	Updated version following Program Clinical Leads workshop, 27 Jan 2011
v0.2.1	2011-02-04	Rob Eastwood	Minor updates following feedback from Trina Gregory
v0.3.0	2011-02-14	Rob Eastwood	Updated version following Clinical Leads forum, 11 Feb 2011
v0.3.1	2011-02-15	Rob Eastwood	Minor updates following feedback from Trina Gregory
v0.3.2	2011-02-18	Rob Eastwood	Further updates following feedback from Trina Gregory
v0.3.3	2011-02-22	Rob Eastwood	Correction to samples following feedback from Trina Gregory
v0.4.0	2011-02-25	Rob Eastwood	Initial updated version following CCRG meeting, 25 Feb 2011
v0.4.1	2011-03-07	Rob Eastwood	Minor edits
v0.4.2	2011-03-10	Rob Eastwood	Updated version following feedback from CCRG Co-Chair Peter Williams and final agreement reached with MMRG.
v0.4.3	2011-03-11	Rob Eastwood	Updated version following further agreement with the eMM team re medication duration.
v0.4.4	2011-03-28	Rob Eastwood	Updated version following comments received from Qld Health
v0.5.0	2011-05-16	Rob Eastwood	Initial updated version following Clinical Leads meeting, 12 May 2011
v0.5.1	2011-05-18	Rob Eastwood	Readied document for external review
v0.6.0	2011-08-22	Rob Eastwood	Updated version following feedback from external stakeholders.
v0.6.1	2011-08-23	Rob Eastwood	Minor updates following feedback from external stakeholders.
v0.6.2	2011-08-30	Rob Eastwood	Minor updates following feedback from external stakeholders.
v0.6.3	2011-09-02	Rob Eastwood	Minor change to maintain consistency across documents

Version	Date	Contributor	Comments
V0.6.4	2011-09-09	Roger Smith	Updates based on workshop held 8 September 2011
V1.0	2011-09-14	Roger Smith	Updates based on final amendments.
V1.1	2011-10-24	Rob Eastwood	Incorporate feedback, remove 'diagnostic imaging' and URL link references. Feedback from Clinical Safety and the Privacy Unit.

Document authorisation

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Preface

Document Purpose

This document presents the information requirements for an Event Summary, which are recommended for use within Australia.

The Event Summary Information Requirements are a logical set of data items for exchange and are therefore independent of any particular platform, technology, exchange format or presentation format.

Updates to this document will be published as additional package components are developed, with feedback from the sector.

Intended Audience

This document is intended for all interested stakeholders including:

- Clinicians, such as general practitioners
- Early adopter hospitals and health departments in the process of planning, implementing or upgrading eHealth systems
- Software vendors developing eHealth system products
- Early adopter general practitioner desktop software vendors
- Senior managers and policy makers, clinical experts, health information managers, IT operations and support teams, system integrators
- Stakeholders associated with the development and use of upcoming eHealth initiatives relating to 'continuity of care'
- Both technical and non-technical readers
- Consumers and consumer representatives

Document Status

Final.

Definitions, Acronyms and Abbreviations

For a list of abbreviations, acronyms and abbreviations, see the Definitions section at the end of the document, on page 46.

References and Related Documents

For a list of all referenced documents, see the References section at the end of the document, on page 47.

1 Introduction

1.1 Overview

This document presents the information requirements for Event Summaries, as recommended for use in Australian eHealth systems.

The Information Requirements are the minimum set of data items that are recommended for implementation in any system that creates and transfers Event Summaries, to support the delivery of quality collaborative care. The inclusion of data in this minimum set is determined by two criteria:

1. The clinical relevancy of the data.
2. The potential for the data to improve clinical safety in a collaborative care environment.

As these specifications define the Information Requirements for exchange, it is anticipated that some Event Summary templates may contain additional types of data to satisfy specific local or specialty healthcare requirements.

1.2 Scope

The following statements regarding scope pertain only to the information requirement specifications herein and not more broadly to the PCEHR scope of work.

1.2.1 Scope Inclusions

The aim of an Event Summary (ES) is to provide information to an individual's Personally Controlled Electronic Health Record (PCEHR) of significant health care events, at the discretion of the clinician, with the consent of the individual. The information may be used by the nominated primary provider to update their local record and the individual's Shared Health Summary (SHS).

The PCEHR Concept of Operations [PCO-2011] states that "an Event Summary is used to capture key health information about significant healthcare events that are relevant to the ongoing care of an individual." Event Summaries can be submitted to the PCEHR System by any participating organisation. However, the scope of the ES design for release 1 will be built around the needs of GPs but is a generic Event Summary and events from other healthcare providers are also envisaged in due course.

1.2.2 Scope Exclusions

The following are out of scope:

- information gathering for the full patient records within the GP clinical information system
- the way the data is transferred from GP desktop to PCEHR
- how the information is formatted for display.

1.3 Purpose

The purpose of the Event Summary Information Requirements is to define the information requirements for a nationally agreed exchange of information between healthcare providers in Australia, independent of exchange or presentation formats.

It is anticipated that these Information Requirements will:

- Promote a common understanding of the requirements for constructing and consumption of Event Summaries.
- Provide a common framework for development and use of semantically interoperable information components to be exchanged between applications, providers, jurisdictions.
- Provide a common framework for defining queries using these information requirements at logical levels, which may be adopted for implementations in local, jurisdictional or national Electronic Health Record environments.
- Provide a common framework upon which to define nationally agreed, specialty-specific information requirements.
- Provide a common framework for nationally defined mappings to specific exchange formats.
- Provide a framework (along with other documents and structures) suitable for the development of national terminology sets that associate specific data items with valid values. These values will be derived from nationally endorsed terminologies maintained and distributed on behalf of Australia by NEHTA's National Clinical Terminology and Information Service (NCTIS). The current terminology sources that will provide this content are LOINC for defined areas of Pathology content, SNOMED CT-AU for all other clinical content and Australian Medicines Terminology (AMT) for medicinal products. Administrative content will be derived either from SNOMED CT-AU or specifically defined external codesets.

1.4 Exchange and Presentation Formats

The information presented here is defined at the logical level and is therefore independent of specific exchange or presentation formats (e.g. HL7 v2 or HL7 Clinical Document Architecture [CDA]). The Information Requirements will be mapped to HL7 CDA exchange format and published following the endorsement of the Information Requirements.

Similarly, the requirement that a particular piece of data be exchanged in an Event Summary does not imply a requirement on the user interface. Some data elements (e.g. 'Document Originating System Identifier') are intended purely for purposes of internal processes within the receiving system. Similarly, other data elements (e.g. 'Date of Birth') have a number of different presentation options available (e.g. 'Birth Day' + 'Year of Birth' etc), which are not considered here. In addition to this, the names given to data components and data items are in many cases not appropriate to be used as field labels on a user interface.

Implementations which modify the data item names in the 'Item' column of the following section to accommodate local practices (e.g. 'Person name' represented as 'Patient Name') may still conform to this specification, but only if the meaning of the variables listed in the other columns are not modified.

Please also note that the order in which the data items are listed in this document is not indicative of the order in which this data should be exchanged or presented to the user.

1.5 Adding Data

It is envisaged that Clinical Information Systems operating at the source should be capable, wherever possible, of transferring relevant data into many of the relevant sections of the Event Summary. This will minimise data entry and may reduce the issues of recording data redundantly in multiple data stores. It is expected that where feeder systems are used, the author's

discretion is exercised in only allowing information relevant to the ongoing care of the patient to be included in the ES, and that the author's due diligence is applied to ensure that the information included from the feeder system is current and accurate.

Note that some of the data elements included in this specification are required for ALL Event Summaries, whereas others need only be completed where appropriate. That is, a conformant Event Summary implementation must be capable of collecting and transferring/receiving all Information Requirement elements.

However:

- Not all data elements require a value in each and every Event Summary (e.g. items that are categorised with '0..1' or '0..Many'). For example, "Diagnostic Investigations (0..Many)" – some clinical circumstances do not require that an ES contain diagnostic investigations.
- Not all data elements are required to be displayed to users, and their labels may be different from those used in the 'Item' column of the Proposed Data Model table in the following sections.

2 Core Components

2.1 Overview

The information components include:

Component
Individual
Event Details
Event Summary Author
Newly Identified Allergies and Adverse Reactions
Medicines
Diagnoses / Interventions
Immunisations
Diagnostic Investigations
Document Control

Each component is firstly described in terms of what the requirements are, providing a rationale.

A small number of indicative samples for usage are included to provide additional clarity but are not intended to be a prescription for display. Note also that all content in the samples is completely fictitious.

This is followed with a representation of the proposed data model for each.

2.2 Guide to this document

The proposed data model for each of the components is defined below, using the following columns:

- *Component*: A high level section or group of data elements
- *Item*: An individual data element or data group. A data item may be a single unit of data (e.g. "Date of Birth"), or a set of data that has a standard structure (e.g. "Address")
- *Type*: The type of data associated with the component or data item. Note that this may be a simple data type (e.g. text, date) requiring a single field, or a predefined structure requiring a group of fields. Refer to legend in section 2.2.1 below.
- *Number of Values Allowed*: The number of times that the given component/item may be included in an Event Summary. Refer to legend in section 2.2.2 below.

The following legends are included to assist the reader with the content of the tables that follow.

2.2.1 Data Type legend

The following table provides a description of the various datatypes in use.

Datatype	Notes
Boolean	A Boolean value can be either true or false, or may be empty.
Codeable Text	Codeable Text is a flexible data type to support various ways of holding text - both free text and coded text.
Coded Text	Values in this data type must come from the bound value list, with no exceptions.
DateTime	DateTime is used for specifying a single date and/or time. It can indicate a level of precision, and define estimated or partial dates.
Integer	Whole numbers.
Quantity	The Quantity data type is used for recording many real world measurements and observations. Includes the magnitude, value and the unit.
Text	Free text string.
Time Interval	Time Interval contains a Start DateTime and (optionally) an End DateTime.
Unique Identifier	An identifier that uniquely identifies a given entity.

2.2.2 "Number of Values Allowed" legend

In order to facilitate understanding by non-technical readers, the standard notation for cardinality has been mapped to a more readable style, in the following ways:

- The value of "*1*" is technically represented as "*1..1*"
- The value of "*1..Many*" is technically represented as "*1..**"
- The value of "*0..Many*" is technically represented as "*0..**"

The following table provides a description of the options for Number of Values Allowed.

Value	Minimum	Maximum	Notes	Example
1	1	1	Must have 1 value and only 1	Vaccine Brand Name (i.e. per each immunisation record)
0..1	0	1	Does not need a value in every ES, but when it does, it can only ever have 1	Medicine Additional Comments (i.e. additional comments are not required for all medicines)
1..Many	1	Many	Must have at least 1 value, and can contain multiples	Individual Address
0..Many	0	Many	Does not need a value in every ES, but when it does, it can contain multiples	Immunisation

Note that the supporting technical documentation (Structured Content Specifications and CDA Implementation Guide) fully complies with the standard technical notation.

3 Component: Individual

Description: The individual is the person about whom the healthcare event has been captured – that is, the subject of the information or the individual.

3.1 Requirements

Data item	Requirement statement	Rationale
Component	Each ES shall always contain information about the individual and shall always contain the following mandatory items.	An ES is only created pertaining to an individual and one cannot exist without that individual.
Person Name	The name of the individual shall be recorded in every ES.	Clinical safety. Identification of the individual. Supports the indexing of clinical documents.
	The recording of individual name shall be consistent with Australian Standards of naming.	Allows interoperability. Eliminates ambiguity.
Person Identifier	Every ES shall contain the individual's Individual Healthcare Identifier (IHI).	Allows interoperability. Eliminates ambiguity. Clinical safety. Supports the indexing of clinical documents.
	An ES shall also be allowed to contain multiple individual identifiers.	Optionally the individual's local identifier to support transition to the use of national identifiers.
Date of Birth	Every ES shall contain the individual's date of birth.	Clinical safety. Identification of the individual. Supports the indexing of clinical documents.
	An approximation for the date of birth shall be allowed (such as only the year, or the month and year) only when the exact date is not known. That is, when the exact date is known, the full date shall be provided.	The individual's exact date of birth may not be known.
	When the date of birth is an approximation, an indication of such shall be included.	Eliminates ambiguity.

Data item	Requirement statement	Rationale
Sex	The individual's sex shall be recorded in every ES.	Clinical safety. Identification of the individual. Supports the indexing of clinical documents.
	The individual's sex shall be recorded using (and be restricted to) the Australian Institute of Health and Welfare Person—Sex Data Element Concept values.	Allows interoperability. Eliminates ambiguity.
Address	The individual's address shall be recorded in every ES.	Identification of the individual.
	The recording of individual address shall be consistent with Australian Standards of address recording.	Allows interoperability. Eliminates ambiguity.
	There shall be provision for recording the individual's address as not known or that they have no fixed address.	Individuals may not always have a fixed place of abode nor may the address be known in all cases.
Communication Details	The ES shall have the provision to record contact details for the individual.	Allows ready access to contact the individual, should the recipient not have those details at hand.
	A value for individual's communication detail shall only be included when it is deemed to be relevant/appropriate to do so (i.e. optional to include a value).	An individual's contact may not be available or appropriate to include.
	An ES shall be allowed to contain multiple individual communication details.	This allows recording of (for example) a home landline, a work mobile and an email address.
	The contact details record shall include provision for the medium (e.g. telephone, email), usage (e.g. home, work) as well as the actual details.	Allows interoperability. Eliminates ambiguity.
Indigenous Status	An indication of whether a person identifies as being of Aboriginal or Torres Strait Islander origin (or an indication of it being not stated etc.) shall be recorded in every ES.	Members of the Indigenous community are eligible for a range of specific services. This will contribute to improved data quality on Indigenous health.

3.2 Samples and usage

a. The individual has only provided the least amount of information – that is, one address and no contact details. They have declined to state their Indigenous status.

INDIVIDUAL		
Name	Mr William SMITH	
IHI	8003600200002222	
Date of Birth	01/01/1946 (63 years)[1]	**DOB Estimated?** No
Sex	Male	
Address	Residence: 20 Chapel Street, Lilydale, VIC, 3002	
Contact		
Indigenous Status	Not stated	

b. Later, the same individual provides more demographic information.

INDIVIDUAL		
Name	Mr William SMITH	
IHI	8003600200002222	
Date of Birth	01/01/1946 (63 years)	**DOB Estimated?** No

[1] The age of the individual would be a calculated value rather than being a separate data item.

INDIVIDUAL	
Sex	Male
Address	Residence: 20 Chapel Street, Lilydale, VIC, 3002 Postal: PO Box 123, Lilydale, VIC, 3002
Contact	Home Phone: 03 3988 7156 Mobile: 0411 378 942 Email: mwsmith@internetprovider.com.au
Indigenous Status	Neither Aboriginal nor Torres Strait Islander origin

c. Another individual does not recall the exact date of their birth.

INDIVIDUAL		
Name	Mr Albert HENRY	
IHI	8003600200003333	
Date of Birth	1946 (63 years)	**DOB Estimated?** Yes
Sex	Male	
Address	Residence: 1 General Street, Broome, WA, 6725	
Contact	Home Phone: 06 1212 1212	
Indigenous Status	Aboriginal but not Torres Strait Islander origin	

3.3 Proposed Data model

Data items	DataType	Number of Values Allowed	Notes
Person Name	Person Name data group	1	The individual's name, structured using a predefined type, consistent with Australian standards of naming (e.g. family name and first name etc), as detailed in NEHTA's Participation Data Specification [PDS2011].
Person Identifier	Unique Identifier	1..Many	The unique identifier of the individual. This must include the individual's Individual Healthcare Identifier (IHI) and optionally the individual's local identifier.
Date of Birth	DateTime	1	The individual's date of birth. Where the exact date of birth is not known, this may be an approximation, which includes only the year, or the month and year.
Date of Birth Estimated?	Boolean	0..1	The level of certainty or estimation of an individual's date of birth.
Sex	Coded Text	1	The sex of the individual. Sex is the biological distinction between male and female. Where there is an inconsistency between anatomical and chromosomal characteristics, sex is based on anatomical characteristics.[2]
Address	Address data group	1..Many	The address of the individual, recorded in a structured format, consistent with Australian standards of address recording, as detailed in NEHTA's Participation Data Specification [PDS2011]. Where the individual's address is not known, the address line can be populated with text entry of "individual has no known address." This may include "No fixed address" if appropriate.

[2] Source of definition: Australian Institute of Health and Welfare; Person—sex Data Element Concept (METeOR identifier: 269716) http://meteor.aihw.gov.au/content/index.phtml/itemId/269716 (accessed 19 May 2011)

Data items	DataType	Number of Values Allowed	Notes
Communication Details	Electronic Communication Details data group	0..Many	The individual's preferred means of contact should be included to facilitate clinical follow-up. Each Contact Details data item includes the medium (e.g. telephone), usage (e.g. home) and details. A value is not always required because it may not be available or appropriate.
Indigenous Status	Coded Text	1	A description of whether a person identifies as being of Aboriginal or Torres Strait Islander origin. Refer to the AIHW definition and code set.[3]

[3] Australian Institute of Health and Welfare, METeOR, Metadata Online Registry. Person—Indigenous status http://meteor.aihw.gov.au/content/index.phtml/itemId/291036 (accessed 19 May 2011)

4 Component: Event Details

Description: This section captures the narrative of the event whereby the health provider describes the event.

4.1 Requirements

Data item	Requirement statement	Rationale
Component	As a minimum, each Event Summary shall include details regarding the event.	The narrative information regarding the individual's event is of high clinical safety value.
Reason for Visit	Every ES shall include the provision for a narrative note regarding the reason for the presentation.	The narrative information regarding the individual's event is of high clinical safety value.
Event Date	Every ES shall include the date at which the event occurred.	Event chronology is crucial in understanding a individual's history.

4.2 Samples and usage

1. An individual is travelling from interstate but requires the assistance of a local GP after they fall and cut their leg. The individual finds a GP and is consequently managed by the new GP who writes an event summary.

EVENT DETAIL	
Event Date	Monday, 20 December 2010
Reason for Visit	William presented to me today after a fall in a local shopping centre. Suffered a deep laceration to his right calf which required cleaning and 4 sutures.

4.3 Proposed Data model

Data items	DataType	Number of Values Allowed	Notes
Event Date	DateTime	1	The date at which the event occurred.
Reason for Visit	Text	0..1	The Reason for Visit contains summary information or comments about the presentation, in narrative form.

5 Component: Event Summary Author

Description: The healthcare provider who has attended to the individual and decides to upload an event summary to the PCEHR.

5.1 Requirements

Data item	Requirement statement	Rationale
Component	Each ES shall record details about the author of the event summary, with details as described below.	From a medico-legal perspective, it is important to know the author of the Event Summary.
Person Name	The ES shall have the provision to record the name of the ES author.	Clearly identifies the ES author.
	The name of the ES author shall be consistent with Australian Standards of naming.	Allows interoperability. Eliminates ambiguity.
	When recorded, only 1 name record shall be allowed for the ES author.	Avoids unnecessary complexity.
Person Identifier	The ES shall record the Healthcare Provider Identifier of the ES author (HPI-I).	Allows interoperability. Eliminates ambiguity. Clinical safety.
	An ES shall be allowed to contain multiple personal identifiers of the ES author, as required.	Such as provider or prescriber numbers.
Healthcare Role	The ES shall record the role of the author in the course of consulting the individual and subsequently writing an ES.	In the first instance, events will pertain to GPs, but in future will encompass a broader range of healthcare providers.
	The Reference set for Healthcare Role shall be derived in such a way that it can be integrated with other related codes sets, such as that required for NESAF.	Allows interoperability and system integration.

Data item	Requirement statement	Rationale
Organisation Name	The ES shall record the name of the organisation/practice to which the ES author is affiliated.	Eliminates ambiguity.
Organisation Identifier	The ES shall record the unique organisation identifier to which the ES author is affiliated.	Allows interoperability.
	A value for the Healthcare Provider Identifier of the organisation (HPI-O) shall be included.	Allows interoperability.
Address	The ES author's practicing address shall be recorded in every ES.	Whilst the ES author may practice at multiple organisations, an individual is generally managed at one of those organisations.
	The recording of the ES author's address shall be consistent with Australian Standards of address recording.	Allows interoperability. Eliminates ambiguity.
	An ES shall be allowed to contain multiple addresses for the ES author.	Caters for the street address as well as the postal address.
Communication Details	At least one contact detail for the ES author shall be recorded in every ES.	Downstream readers of the ES may need to contact the ES author.
	An ES shall be allowed to contain multiple ES author communication details.	This allows relevant telephone numbers (i.e. daytime, after hours, mobile, etc.) and email addresses to be recorded for future reference.
	The contact details record shall include provision for the medium (e.g. telephone, email), usage (e.g. after hours) as well as the actual details.	Allows interoperability. Eliminates ambiguity.

5.2 Samples and usage

1. The event summary is written by a locum GP.[4]

AUTHOR	
Name	Dr Henry SMITH [HPI-I: 8003610200002389]
Healthcare Role	Locum General Practitioner
Practice	Port Douglas Super Clinic [HPI-O: 8003620000000222]
Address	2 The Esplanade, Port Douglas QLD 4444
Contact	Phone: 07 7777 7777 After hours: 07 7777 8888 Email: podougSC@internet.com

5.3 Proposed Data model

Data items	DataType	Number of Values Allowed	Notes
Person Name	Person Name data group	1	The name of the ES author, structured using a predefined type consistent with Australian standards of naming (e.g. family name and first name etc), as detailed in NEHTA's Participation Data Specification [PDS2011].

[4] Health identifier numbers are predominantly for system to system usage and as such they may not necessarily be displayed to end users. The HI numbers are only displayed here to provide additional clarity for these specifications and as such, the reader should not consider this a display requirement.

Data items	DataType	Number of Values Allowed	Notes
Person Identifier	Unique Identifier	1..Many	The unique individual identifier of the ES author which must include the Healthcare Provider Identifier of the ES author (HPI-I) and optionally other identifiers (such as provider or prescriber numbers).
Healthcare Role	Codeable Text	1	The role the author is playing in the course of consulting the individual and subsequently writing an ES. For example, 'Usual GP' or 'Locum GP'.
Organisation Name	Organisation Name data group	1	The name of the healthcare provider organisation at which the ES author practices.
Organisation Identifier	Unique Identifier	1..Many	The unique organisation identifier of the ES author's practice, for which the Healthcare Provider Identifier of the organisation (HPI-O) must be provided. Optionally, local identifiers may also be included.
Address	Address data group	1..Many	The address of the ES author, recorded in a structured format consistent with Australian standards of address recording, as detailed in NEHTA's Participation Data Specification [PDS2011].
Communication Details	Electronic Communication Details data group	1..Many	The contact details for the ES author. The preferred means of contact should be included and should include at least one method of communication. Each Contact Details includes the medium (e.g. telephone), usage (e.g. work) and details.

6 Component: Newly Identified Allergies and Adverse Reactions

Description: This section includes allergies and adverse reaction to all substances that were identified at the given event. This might include food allergies, bee sting allergies as well as prescription and non-prescription medicines.

Note: An indicator of compliance with the RACGP Practice Standard 1.7 on health summaries is that a practice can demonstrate that at least 90% of their active patient records contain a current health summary that includes, where appropriate, a record of known allergies.

These requirements have been developed in collaboration with a specific Medication Management Reference Group (MMRG) Project Working Group and following discussions within Standards Australia.

6.1 Requirements

Data item	Requirement statement	Rationale
Component	The Event Summary shall include the provision to include information regarding allergies and adverse reactions should it be relevant to do so.	Information regarding an individual's allergies and adverse reactions is of high clinical safety value.
	Each ES shall have the option to include one (or more) Allergies and Adverse Reactions.	Individuals often have multiple Allergies and Adverse Reactions and allows for future decision support capability.
	When Allergies and Adverse Reactions are added to an ES, the types of information to include are as follows.	
Agent Description	Every allergy and adverse reaction listed in the ES shall contain a description of the causative agent.	Clinical safety.
	Values for the description of the allergy and adverse reaction agent shall be derived from a SNOMED code set with the option for free text.	Allows for the potential for machine processing / decision support.

Data item	Requirement statement	Rationale
Reaction Description	There shall be the provision for an allergy and adverse reaction record to include the description of the reaction that was caused by the aforementioned agent.	Unambiguous description of the reaction for clinical safety and allows better informed future management.
	There shall be the provision for more than one reaction to be recorded for a single agent, when appropriate.	An individual may experience multiple adverse reactions to a single agent.
	Preferably, values for the description of the reaction shall be derived from a SNOMED code set (whilst allowing for the option for free text).	Allows for the potential for machine processing / decision support.
	A value for the reaction description shall only be included at the discretion of the ES author, i.e. when it is deemed relevant / appropriate to do so (i.e. optional to include a value).	It may not always be known what the specific reaction is to a given agent. Individuals may report that they have been told that they have a reaction to a given agent but it may not be clear to them what the reaction was specifically. For example, an adult reporting that they were told as a child that they react to a given agent, but they cannot recall what happened to them specifically.

6.2 Samples and usage

1. There is no information about any allergies and adverse reactions.

   Individuals may be acutely unwell or otherwise indisposed and unable to provide the relevant health information to their health provider. Further, there may be no allergies or adverse reactions that pertain to this event. The individual may not actually have any allergies or adverse reactions, this information is not known. In these circumstances, it is suggested that the event summary would not display this section.

2. An individual has been asked and a number of reactions are recorded. Note that the individual has two reactions to penicillin.

ALLERGIES / ADVERSE REACTIONS	
Agent	**Reaction description**
Penicillin	Severe urticaria on trunk and legs; Nausea and vomiting

6.3 Proposed Data model

Data items		DataType	Number of Values Allowed	Notes
Allergies / Adverse Reaction		Group	0..Many	The data group for the newly identified allergies and adverse reactions for the individual containing the relevant reaction details. Multiple reactions are allowed and the following two data items apply for each reaction added.
	Agent Description	Codeable Text	1	The agent / substance causing the allergy / adverse reaction experienced by the individual. The agent must always be recorded.
	Reaction Description	Codeable Text	0..Many	The signs and/or symptoms experienced or exhibited by the individual as a result of the allergies / adverse reaction to the specific agent/substance.

7 Component: Medicines

Description: Medicines that the individual is taking which are considered by the healthcare provider to be relevant to the event. This list should contain prescribed medications, as well as over-the-counter medications such as aspirin and possibly complementary medicines.

Note: An indicator of compliance with the RACGP Practice Standard 1.7 on health summaries is that a practice can demonstrate that at least 75% of their active patient records contain a current health summary that includes, where appropriate, a current medicines list.

These requirements have been developed in collaboration with a specific MMRG Project Working Group and following discussions within Standards Australia.

Note that the medicines included herein do not constitute a full medications profile, but rather those which have specifically changed as a result of the event, or those directly relevant to it.

7.1 Requirements

Data item	Requirement statement	Rationale
Component	The Event Summary shall include the provision to include information regarding medicines should it be relevant to do so.	Clinical safety
	Each ES shall have the option to include one (or more) medicine.	Individuals often have multiple medicines and allows for future decision support capability.
	When medicines are added to an ES, the types of information to include are as follows:	
Item Description	Every medicine listed in the ES shall include details that fully describe it, including the name of the medicine (must include the active ingredient and where available, the brand name), strength and dose form, where appropriate.	Allows interoperability, eliminates ambiguity and is vital to ensure high quality safe clinical care.
	Preferably, where the medicine can be identified by an Australian Medicines Terminology (AMT) concept, this shall be the AMT ConceptID and Preferred Term.	Allows interoperability, eliminates ambiguity and is vital to ensure high quality safe clinical care.

Data item	Requirement statement	Rationale
	Where the medicine cannot be identified by an Australian Medicines Terminology (AMT) concept, the item description shall be allowed to be carried in free text.	This enables the ability to enter medicines not recognised by AMT e.g. overseas medicines such as those taken by international visitors and students.
Status	Every medicine listed in the ES shall include an indication of its corresponding status.	It is important for the recipient, in particular the usual GP, to differentiate which medicines may require their attention. For example a medicine with a status of “change recommended” will require action by the usual GP compared to a medicine that has been unchanged.
	The medicine status vales shall be exclusively derived from a predetermined code set, that includes the following options:	Provides clarity to other healthcare providers. This allows software to group like information together and to provide display or validation intelligence (e.g. medications with a status of ‘change’ must also have a value in the data item ‘reason for change’).

Data item	Requirement statement		Rationale
		"Existing – changed"	As a result of the event consultation, a medicine that was previously taken by the individual may actually be changed at the event as it required immediate attention.
		"Existing – review recommended"	As a result of the event consultation, it may be recommended to the usual GP that a medicine that was previously taken by the individual be reviewed.
		"Existing – ceased"	As a result of the event consultation, a medication that was previously taken by the individual may actually be ceased by the event clinician as it required immediate attention.
		"New – prescribed"	As a result of the event consultation, a new medication may be prescribed for the individual.
		"New – prescription recommended"	As a result of the event consultation, it may be recommended that the usual GP prescribe a new medicine to be taken by the individual. The addition may not be urgent or there may be an arrangement that all medicine changes are to be enacted by the GP as the coordinator of the individual's overall care.
Dose Instructions	Every medicine listed in the ES shall include the dose instructions, describing how the individual is taking the medicine.		Vital to ensure high quality safe clinical care.
Reason for Medicine	There shall be the provision for a medicine record to include the reason why the individual is taking the medicine.		It is important for the GP and other recipients to understand the rationale for relevant medicine, particularly given that some medications may have multiple purposes.
	A value for Reason for Medicine for a given medicine shall only be included when it is relevant / appropriate to do so (i.e. optional to include a value).		The reason an individual may be taking an over-the-counter or complementary medicine may not be clear to the ES author.

Data item	Requirement statement	Rationale
Additional Comments	There shall be the provision for a medicine record to include additional information that may be needed to ensure the continuity of supply, continued proper use, or appropriate medication management. This may include comments regarding medication duration.	Clinical safety.
	A value for a value for Additional Comments for a given medication shall only be included when it is deemed by the event summary author to relevant/appropriate to do so (i.e. optional to include a value).	Not always required.
Reason for Change	There shall be the provision for a medication record to include the reason that the change was made (or recommended to be made) to a medicine as a result of the event consultation.	It is particularly important for any medicine changes to be well understood by the recipients of the letter.
	An ES shall include a description of the Reason for Change for a given medicine, whenever (and only when) the status of that medicine is: - "Existing – changed" - "Existing – review recommended" - "Existing - ceased"	Only medicines that have been changed/ceased (or recommended to be changed/ceased) should logically require a reason for that change.

7.2 Samples and usage

1. There is no information about any medicines.

   Individuals may be acutely unwell or otherwise indisposed and unable to provide the relevant health information to their health provider. Further, the individual may not actually be taking any medications, this information is not known or there may be none that pertain to this event. In these circumstances, it is suggested that the event summary would not display this section.

2. It has been determined that the individual taking a number of medications.

MEDICINES					
Status	**Medicine**	**Dose Instructions**	**Reason for Medicine**	**Additional Comments**	**Reason for Change**
New – prescribed	Lasix (frusemide 40 mg) tablet	1 tablet once daily oral	Fluid retention		
Existing - changed	Spiriva (tiotropium bromide 18mg per inhalation) inhalant	1 inhalation per day	COPD		Weaning off
Ceased	St John's Wort	As directed by packaging			No longer required

7.3 Proposed Data model

Data items		DataType	Number of Values Allowed	Notes
Medicine		Group	0..Many	The data group for the medicines that have been modified or added/ceased subsequent to the event. Multiple medications are allowed and the following data items apply for each medicine added.
	Item Description	Codeable Text	1	The details that fully describe a medicine, including the name of the medicine (must include the active ingredient and where available, the brand name), strength and dose form, where appropriate.
	Dose Instructions	Text	1	A description of how a particular product is being taken by the individual. This must include the route, dose quantity, frequency and any additional instructions required to safely describe the appropriate dosage. This should also include the administration schedule. In systems which support the discrete collection of dosage instructions data elements, this item only needs to be populated when the discrete dosage items are not.
	Status	Coded Text	1	The status of the medicine item at the time of the event summary.
	Reason for Medicine	Codeable Text	0..1	The clinical justification (e.g. specific therapeutic effect intended) for the use of the medicine.

	Additional Comments	Text	0..1	Any additional information that may be needed to ensure the continuity of supply, continued proper use, or appropriate medicine management – e.g. "Patient requires an administration aid", "Dosage to be reviewed in 10 days", "Target INR for warfarin management". This may include comments regarding medication duration.
	Reason for Change	Text	0..1	The justification for the stated change in medicine. Required when the medicine status is not equal to 'new' or 'unchanged'.

8 Component: Diagnoses / Interventions

Scope: Data structure for capturing information about diagnoses and interventions that are relevant to the particular clinical event. That is, diagnoses that were identified at the event or that are significant to it or any interventions performed during the event or those occurring in the past that are significant to it.

8.1 Requirements

Data item	Requirement statement	Rationale
Component	The Event Summary shall include the provision to include information regarding diagnoses and procedures should it be relevant to do so.	Information regarding an individual's Diagnoses and Interventions is vital to ensure high quality safe clinical care.
	Each ES shall have the option to include one (or more) diagnoses or interventions.	Individuals often have multiple entries in medical history and this allows for future decision support capability.
Diagnosis and Intervention Description	Every Diagnoses and Interventions item listed in the ES shall contain a corresponding description.	This provides the content for the Diagnoses and Interventions.
	Preferably, values for the description of the Diagnosis and Intervention items shall be derived from SNOMED CT with the option for free text.	Allows for electronic transmission of information and decision support.
	The semantically distinct concepts of diagnoses and procedures shall be combined into one data item.	A chronological list may reduce clinical risk due to the viewing of information in an expected manner.
Diagnosis and Intervention comments	There shall be the provision for a Diagnosis and Intervention record to include an additional comment.	Provides flexibility to add context or notes etc.

8.2 Samples and usage

1. There is no information about Diagnoses and Interventions.

   Individuals may be acutely unwell or otherwise indisposed and unable to provide the relevant health information to their health provider. The individual may not actually have any diagnoses or procedures, this information is not known or that there are none that pertain to this event. In these circumstances, it is suggested that the event summary would not display this section.

2. During the particular event, a patient is treated for acute bronchitis with antibiotics as well as having a laceration attended to.

DIAGNOSES AND INTERVENTIONS	
Description	**Additional Comments**
Acute bronchitis	Treated with antibiotics
Deep right calf laceration cleaned & sutured	5 x 3\0 sutures under LA

8.3 Proposed Data model

Data items		DataType	Number of Values Allowed	Notes
Diagnoses and Interventions		Group	0..Many	The data group for recording the Diagnoses and Interventions. Multiple items are allowed and the following data items apply for each one added.
	Diagnosis and Intervention Description	Codeable Text	1	A description of the diagnosis or procedure. The datatype of Codeable text allows for free text entry in the short term, with coded options in the longer term.
	Additional Comments	Text	0..1	Free text comments providing additional information relevant to the diagnosis or procedure in question.

9 Component: Immunisations

Description: A section that groups together details of immunisation/vaccination program(s) that has/have been administered (or reported to be administered) to the person/individual by a health care provider during the event.

Note: An indicator of compliance with the RACGP Practice Standard 1.7 on health summaries is that a practice can demonstrate that at least 75% of their active patient records contain a current health summary that includes, where appropriate, a record of immunisations.

These requirements have been developed in collaboration with a specific MMRG Project Working Group and following discussions within Standards Australia.

9.1 Requirements

Data item	Requirement statement	Rationale
Component	The Event Summary shall include the provision to include information regarding immunisations should it be relevant to do so.	Ensures individuals are appropriately immunised.
	Each ES shall have the option to include one (or more) immunisations.	An individual would typically have multiple immunisations.
	When immunisations are added to an ES, the types of information to include are as follows.	
Vaccine Name	Every immunisation included in the ES shall include its brand name.	Ensures unambiguous identification of the particular immunisation.
	Preferably, where the immunisation can be identified by an Australian Medicines Terminology (AMT) concept, this shall be the AMT ConceptID and Preferred Term. The name shall include both the brand and generic names.	Allows interoperability, eliminates ambiguity and is vital to ensure high quality safe clinical care.
	Where the immunisation cannot be identified by an Australian Medicines Terminology (AMT) concept, the item description shall be allowed to be carried in free text.	This enables the ability to enter vaccinations not recognised by AMT e.g. vaccinations administered overseas.

9.2 Samples and usage

1. There is no information about any immunisations.

   The nature of the event did not require the individual to have any new immunisations. In this circumstance, it is suggested that the event summary would not display this section.

2. The individual has one immunisation at the particular event.

IMMUNISATIONS
Vaccine Name
Boostrix

9.3 Proposed Data model

Data items	DataType	Number of Values Allowed	Notes
Immunisation	Group	0..Many	The data group for recording the immunisation details, which can include details of immunisations that have been administered. Multiple immunisations are allowed and the following data items apply for each one added.
Vaccine Brand Name	Codeable Text	1	The vaccine product's generic and brand name.

10 Component: Diagnostic Investigations

Description: Describes any diagnostic investigations performed on, or requested for the individual, relevant to the event.. Pending results can be indicated using a Result Status of 'pending'.

10.1 Requirements

Data item	Requirement statement	Rationale
Component	An ES shall have the provision for diagnostic results if required.	The inclusion of Diagnostic Investigation results can provide recipients with important supporting information to the assessment and plans.
	Multiple diagnostic investigations shall be allowed to be conveyed in an ES.	Flexibility
Investigation Type	Each investigation included in an ES shall include designation of the 'investigation type'; e.g. 'Pathology'.	This allows software at either end to group like investigation types together, thereby aiding readability.
Investigation Name	Each investigation included in an ES shall include the corresponding name of that investigation.	Clinical safety. Eliminates ambiguity.
Result Status	Each investigation included in an ES shall include the corresponding status of that investigation; e.g. final, pending.	Clinical safety.
Result content	There shall be the provision for Diagnostic Investigations to be associated with an ES as embedded text.	Basic text data may be embedded in the ES where required.

10.2 Samples and usage

1. A number of diagnostic investigations may be included within the event summary.

DIAGNOSTIC INVESTIGATIONS - Pathology	
Name	Status
UECs	Pending
FBE	Pending
LFT	Final

10.3 Proposed Data model

Data items		DataType	Number of Values Allowed	Notes
Diagnostic Investigation		Group	0..Many	The data group for recording the Diagnostic Investigation(s). Multiple Diagnostic Investigations are allowed and the following data items apply for each one added.
	Investigation Type	Codeable Text	1	The type or category of investigation performed on the individual – e.g. 'Pathology'. Whilst the type of investigation will be obvious to the majority of clinical readers, the purpose of this data item is to allow the software to sort/group like types together (i.e. all pathology results to be grouped together).
	Investigation Name	Codeable Text	1	The name of the investigation performed on the individual (e.g. 'INR').
	Result Status	Codeable Text	1	The status of the investigation result (e.g. 'pending', 'interim', 'final' or 'amended').
	Data	Encapsulated Data	0..1	A text summary of the investigation report.

11 Component: Document Control

Description: A section that describes information about the event summary document. Much of the information contained in Document Control is technical in nature and as such is not described here, but is included in the following section. Described below are those elements which have clinical relevance.

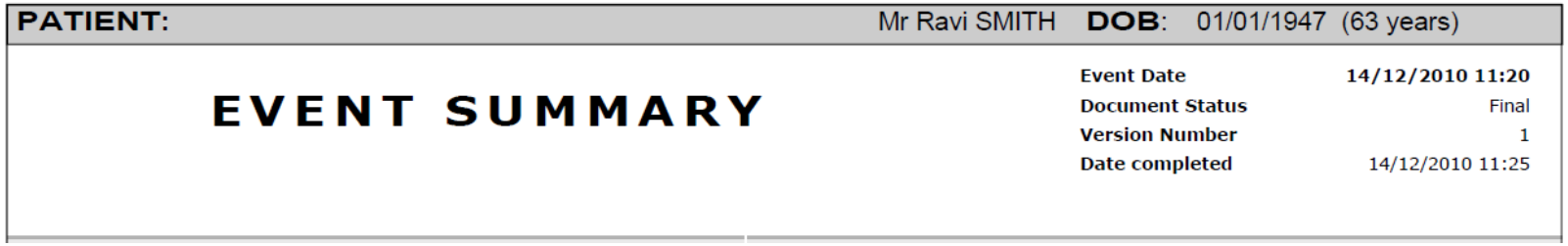
11.1 Requirements

Data item	Requirement statement	Rationale
Component	Each Event Summary document shall include metadata about the document.	Document management requirements.
	Document control information is predominantly technical and as such does not require display for end users.	
Document Status	Each event summary shall include the status of the document.	Documents may have varying states of completion and it assists the reader to know the latest version of the document is. Provides assurance to the reader that they are looking at the latest document.
	Values for Document Status shall be sourced from a coded reference set that includes 'Interim', 'Final', 'Amended'.	Assists clarity
DateTime Attested	The date/time when the ES document was attested (or finalised, or signed off) by the document author.	Clinical safety requirement to ensure that the reader knows exactly when the document was written.

11.2 Samples and usage

1. Document Header

An event summary may display various elements of the document control near the top of the summary.



11.3 Proposed Data model

Data items	DataType	Number of Values Allowed	Notes
Document Status	Coded Text	1	The status of the document (e.g. 'Interim', 'Final', 'Amended')
DateTime Attested	DateTime	1	The date/time when the ES document was attested (or finalised, or signed off) by the document author.

12 Technical Document Control Requirements

The following data items are included for completeness as they represent technical requirements to ensure correct identification of each document etc.

Data items	DataType	Number of Values Allowed	Notes
Document Instance Identifier	Unique Identifier	1	The universally unique identifier of this instance of the Event Summary document.
Document Set Identifier	Unique Identifier	1	The universally unique identifier of the set of documents related to the same healthcare encounter, of which the Event Summary document is a versioned instance.
Version Number	Integer	1	The version number of the Event Summary document instance.
Document Originating System Identifier	Unique Identifier	1	A universally unique identifier of the system used to create the Event Summary document.
Business Document Type	Coded Text	1	The name of the Event Summary document type used – e.g. 'Event Summary'
Business Document Type Version Number	Integer	1	The version number of the Event Summary document type used to create the Event Summary.
Language	Coded Text	1	The language primarily used within the document (e.g. 'en-AU')
Structured / unstructured clinical document flag	Coded Text	1	The PCEHR Concept of Operations describes two options for this flag: - A "structured clinical document", which has all the above fields and also contain additional structured data describing the details of the event (e.g. medicines, allergies, etc); or - An "unstructured clinical document", which has all the above fields and also contains information in the form of an

			attached PDF.

13 Event Summary Scenario

An example scenario is as follows:

A patient, John, has a complex chronic illness and is actively managed by his usual GP. The usual GP has regularly maintained an up-to-date Shared Health Summary for John, which has been published to John's PCEHR record. John has a holiday interstate, falls ill and needs to see a GP for management. The new GP reviews John's SHS and gets acquainted with John's available history.

As a result of the presenting problem, the GP makes some changes to John's medications and decides to create an Event Summary which is published to the PCEHR.

On return to home, John is seen by his usual GP and rather than relying on John's memory of the recent event, she reviews the event summary written by the other GP.

The usual GP decides to incorporate the new medications listed in the Event Summary into her own clinical records and then updates John's SHS if appropriate.

14 Known Issues

The following issues cannot be addressed in time for release 1, and will be dealt with post release 1.

Topic	Issue
Immunisation Sequence Number	It was requested that consideration be given to including sequence number as people often do not remember and it would be of great value to record this when administered so other parties can see what has been done. In the context of a GP Event Summary this was not deemed to be a critical. The full Clinical Leads Forum at its meeting in August 11 and Program Clinical Leads did not support this view in iteration 1 of the Event Summary considering it prudent to be minimalist. This requirement will be considered in the next release of this product.
Diagnoses and Interventions	It was decided by clinicians associated with the external review of this message and the Clinical Leads Forum that the one combined field was appropriate and this package was initial developed around the needs of GPs and as such this position has been reached. Other models can separate these items if required.
Alerts	The idea of alerts has been raised previously but is excluded from release 1. Although this is considered an important area of discussion there are no nationally agreed information components or standards for alerts so this will require a separate piece of work that will be considered by CCRG
Pathology	When a pathology test has been requested, the ability to find out which lab is processing the request was thought to be very useful for clinicians so they may request a copy if required prior to the test being uploaded to the PCEHR. A potential issue here is that the pathology request form issued to a patient could be taken anywhere, so the source of the provider doing the test can be selected by the patient. The second issue is that the ES be done before the requester has checked the result and requested the test to be uploaded to the PCEHR, meaning there may only be an event summary indicating a test was done not that the test has actually been uploaded and available.
Use of Discharge Summary instead of Event Summary by some hospitals	It has been noted that some hospitals produce a discharge summary even when a patient is not actually admitted, and that the switch to producing an ES may cause some business process issues. The presence of either a copy of a Discharge Summary or an Event Summary would not be considered to be an issue from the perspective of the PCEHR, as in either case they may contain clinically relevant information and would need to be reviewed when creating a Shared Health Summary, or for Consolidated View purposes for example.
Individual's Sex	It is recognised that the inclusion of the data item for Individual's Sex is solely the physiological or biological distinction as defined by the clinician, for the benefit of clinical care. The additional social and cultural "gender role" that an individual identifies with is not captured but is a consideration for future releases.

Topic	Issue
Individual's Indigenous Status	NEHTA has adopted the label "Indigenous Status" from the AIHW as it is considered a nationally recognised source. However, it is also recognised that the preferred terminology for this label may be "Aboriginal and or Torres Strait Islander Status" and as such this disparity will be addressed in future versions.
Individual's Address	The current specifications mandate an address for a patient, but it is recognised that in some circumstances an individual may be put at personal risk if their address was divulged (e.g. domestic violence). The underlying definition of the data elements for structured address (NEHTA Participation Data Specification [PDS2011]) does include a free text item for "Unstructured Address Line" that may convey a value of "None Supplied" to meet this requirement. However, the preferred option for future versions would be to redefine this data item to be an optional value.

Definitions

This section explains the specialised terminology used in this document.

Shortened Terms

This table lists abbreviations and acronyms in alphabetical order.

Term	Description
AMT	Australian Medicines Terminology
CDA	Clinical Document Architecture
GP	General Practitioner
HI	Health Identifiers
HL7	Health Level7
HPI-I	Healthcare Provider Identifier of the individual
HPI-O	Healthcare Provider Identifier of the organisation
IHI	Individual Healthcare Identifier
LOINC	Logical Observation Identifiers Names and Codes
MMRG	NEHTA Medication Management Reference Group
NCTIS	NEHTA's National Clinical Terminology and Information Service
PCEHR	Personally Controlled Electronic Health Record
SNOMED CT	Systemised Nomenclature of Medicine, Clinical Terminology

Glossary

This table lists specialised terminology in alphabetical order.

Term	Description
Business Architect	A Business Architect is anyone who looks at the way work is being directed and accomplished, and then identifies, designs and oversees the implementation of improvements that are harmonious with the nature and strategy of the organisation. Source: http://www.businessarchitects.org
Development Team	The Developer writes the code for the specifications that the Development leads provide. Source: http://www.developer.com
Interoperability	The ability of software and hardware on multiple machines from multiple vendors to communicate. Source: The Free On-line Dictionary of Computing. Denis Howe. 21 Apr. 2008. From: Dictionary.com - http://dictionary.reference.com/browse/Interoperability
Solutions Architect	The Solutions Architect is typically responsible for matching technologies to the problem being solved. Source: http://www.developer.com
Technical Architect	The technical architect is responsible for transforming the requirements into a set of architecture and design documents that can be used by the rest of the team to actually create the solution. Source: http://www.developer.com

References

At the time of publication, the document versions indicated are valid. However, as all documents listed below are subject to revision, readers are encouraged to use the most recent versions of these documents.

References

The documents listed below are non-package documents that have been cited in this document.

Reference Documents			
[REF]	Document Name	Publisher	Link
[PCO-2011]	Concept of Operations Relating to the introduction of a Personally Controlled Electronic Health Record System, Version 1.0 – 9 Sep 2011	DOHA & NEHTA 2011	http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/Content/pcehr-document
[PDS2011]	Participation Data Specification Version 3.2	NEHTA 2011	http://www.nehta.gov.au/connecting-australia/terminology-and-information/clinical-information-mi Open menu: Clinical Information Detailed Clinical Model Specifications (previously Data Specification)

Related Reading

The documents listed below may provide further information about the issues discussed in this document.

Related Documents			
[REF]	Document Name	Publisher	Link
[NEHTAWEB]	NEHTA Web Site	NEHTA	http://www.nehta.gov.au/